

Appl. No. 10/720,505
Atty. Docket: 2003B127
Amendment dated July 10, 2006
Reply to Notice of Non-Compliant Amendment dated June 27, 2006

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REMARKS/ARGUMENTS

Claims 1-62 are currently pending in the above-captioned application for the Examiner's review and consideration. Claims 63-106, corresponding to Group II, are withdrawn pursuant to an election made via telephone by Applicants' representative; nevertheless, Applicants reserve the right to pursue these apparatus claims in one or more divisional or continuing applications without prejudice. Applicants had previously elected Group I, process claims 1-62, and hereby confirm said election. No new matter has been added.

Claim Rejections – 35 USC § 103(a)

Claims 1-62 were rejected under 35 USC § 103(a) as being obvious over U.S. Patent No. 6,482,998 to Kuechler *et al.* (hereinafter "Kuechler"), in view of U.S. Patent No. 5,744,680 to Mulvaney, III, *et al.* (hereinafter "Mulvaney"), for the reasons set forth on pages 4-6. Applicants respectfully traverse this rejection for the following reasons.

The Examiner acknowledged that Kuechler fails to disclose separation steps for olefin recovery, as well as "the amount of oxygenate in the water-containing stream added to the fractionator." *See* Office Action at page 5. Applicants, however, respectfully submit that Kuechler also fails to disclose or suggest the liquid, oxygenate-rich stream itself as a second and separate input stream to the fractionation tower.

Kuechler teaches a single stream input to the fractionator, termed the fractionator feed fraction in column 12, lines 40-41 (*see also* the "second fraction of the heavy product fraction effluent" of column 9, line 62, through column 10, line 2), and which is identified as 21 (or 23) in Figure 1. Kuechler further teaches, as Examiner notes on page 5 of the Office Action, that other streams having compositions similar to or compatible with this stream (21) can be "combined with the second fraction [or fractionator feed fraction] first and the combined stream is sent to the fractionator." *See* Office Action at page 5 (citing Kuechler, column 10, lines 2-7) (emphases added). While Kuechler does disclose a reflux stream (32) recycled from the fractionator overhead stream (26), Applicants respectfully submit that this fractionator overhead stream is not a liquid, oxygenate-rich stream comprising at least about 20 wt% oxygenate according to the claimed invention. Indeed, Applicants' disclosure (*see* instant Figure) includes a reflux stream (200) from the fractionator overhead stream (emptying into reflux drum 170),

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which is distinct from Applicants' claimed liquid, oxygenate-rich stream comprising at least about 20 wt% oxygenate (270).

Kuechler neither discloses nor suggests that the fractionator be fed separate feed streams. Indeed, Kuechler teaches away from separating the streams, in that Kuechler teaches that any additional streams should be combined with stream 21 to form a single stream 23 added to the fractionator. Applicants respectfully note that independent claim 1 recites that two separate streams enter a fractionation tower, the first being the liquid stream rich in said water and unreacted oxygenate introduced to a feed tray therein (*see* lines 7-8), and the second being the liquid, oxygenate-rich stream comprising at least about 20 wt% oxygenate introduced above said feed tray (*see* lines 10-11). There is no such disclosure, nor even suggestion in Kuechler of two such distinct streams entering the fractionator.

Applicants further clarify that it is the stream being introduced at a point above the feed tray which comprises at least about 20 wt% oxygenate, and not the water-containing stream to which the Examiner referred in the Office Action.

Mulvaney does not remedy the deficiencies of Kuechler. Mulvaney was cited for its description of using a recovery train to recover at least some olefins. Mulvaney, however, does not disclose, nor even suggest the feature of independent claim 1 that two distinct streams be fed into a fractionation tower, a first at a feed tray, and a second comprising at least about 20 wt% oxygenate at a point above the feed tray.

Thus, even the combination of Kuechler and Mulvaney does not disclose or suggest all the elements of claims 1-62. As a result, Applicants respectfully submit that claims 1-62 cannot be obvious over Kuechler, Mulvaney, or their combination, and respectfully request that the obviousness rejection be reconsidered and withdrawn.

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CONCLUSION

Applicants respectfully submit that in view of the foregoing arguments, the present claims describe new, useful, and unobvious processes. Accordingly, allowance of the present claims is earnestly solicited, early notice of which would be appreciated.

Respectfully submitted,

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